

**DOCKET NO.: 02-42 US****IN THE CLAIMS:**

Please amend the claims as follows:

Claim 1 (currently amended): A vibrating pumping stage for vacuum pumps, comprising:  
a supporting base (15; 15'), comprising a silicon wafer;  
a vibrating assembly (121; 221; 321) comprising a planar membrane  
fastened to said supporting base (15; 15'), said vibrating assembly comprising an active surface by  
which the deflection of the molecules of surrounding gas is caused during vibration of said vibrating  
assembly, a cavity (13) housing said electrode formed in said supporting base below said vibrating  
assembly and  
a control device (21) placed onto disposed between said supporting base (15; 15') and said  
vibrating assembly to make said vibrating assembly vibrate and consequently cause deflection of said  
gas molecules, wherein said control device (21) is an electrode and wherein a variable electric field is  
applied between said electrode and said vibrating assembly to cause vibration of said vibrating  
assembly with respect to said supporting base, said electric field generated by a sinusoidal signal and  
said sinusoidal signal having a frequency close to the resonance frequency of said vibrating assembly,  
said membrane being fastened to said supporting base at edge regions of said membrane, whereby  
said membrane is suspended above said cavity.

Claims 2-6 (canceled)

Claim 7 (currently amended): The vibrating pumping stage as claimed in claim 6 1, wherein said  
vibrating assembly is a planar resilient membrane is resilient.

Claim 8 (currently amended): The vibrating pumping stage as claimed in claim 7 1, wherein said  
planar membrane is substantially rectangular and is fastened to said supporting base at said edge  
regions comprise its ends (123a, 123b) corresponding to the minor sides of said rectangle.

Claim 9 (currently amended) : The vibrating pumping stage as claimed in claim 7, wherein  
said membrane is substantially H-shaped and said edge regions comprise is fastened to said  
supporting base at its four ends (223a, 223b).

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Claim 10 (currently amended): The vibrating pumping stage as claimed in claim 9, wherein said edge regions of said membrane is fastened to said supporting base along further comprise a peripheral rim (17) surrounding said cavity (13), ~~whereby said membrane is suspended above said cavity.~~

Claim 11 (original): The vibrating pumping stage as claimed in claim 10, wherein said membrane comprises a side extension (125) partly overlapping said peripheral rim so as to define a corresponding first contact area (127), and wherein said electrode comprises a side extension (23) such that the electrode partly overlaps the peripheral rim (17) of said supporting base (15) so as to define a corresponding second contact area (27).

Claim 12 (original): The vibrating pumping stage as claimed in claim 11, wherein said sinusoidal signal is applied to said first and second contact areas to generate a variable electric field between said vibrating assembly and said control device, said electric field causing vibration of said assembly.

Claim 13 (currently amended): The vibrating pumping stage as claimed in claim 4 claim 1, wherein said planar membrane of said vibrating assembly comprises a rigid membrane (331) supported by resilient members or suspension springs (333), placed between said membrane (331) and said supporting base, said resilient members being fastened to said supporting base.

Claim 14 (original): The vibrating pumping stage as claimed in claim 13, wherein said membrane and said supporting base have a substantially parallelepipedal rectilinear shape.

Claim 15 (original): The vibrating pumping stage as claimed in claim 14, wherein said resilient members are S-shaped.

Claim 16 (currently amended): The vibrating pumping stage as claimed in claim 14, wherein said membrane has openings (329) to form a sufficiently rigid trellis structure making causing the membrane to vibrate substantially parallel to the plane on which it lies in idle conditions.

Claims 17-20 (canceled)